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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,703	05/19/2006	Keon Joon Ahn	2108.3	5127
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/579,703

Applicant(s)

AHN ET AL.

Examiner

BENYAM KETEMA

Art Unit

2629

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In an amendment dated, February 24, 2010 the applicant amended claim 1, 6 -7 and cancelled claim 5 and 9, currently claims 1-4, 6-8 and 10 are presented for examination.
2. After further consideration the Examiner has withdrawn objection of claim 5 and 9 and also the Final rejection.

Response to Arguments

3. Applicant's arguments in respect to claim 1 and 7 has been fully considered and is not persuasive.

On page 10 of the Remarks, the Applicants argue that Gordon or Shinz fails to teach the claimed feature of *"a step of maintaining a database in which at least one character image and character data are recorded corresponding to each other; wherein the step of inputting a character by moving the pointer from the pointer area according to the sensed movement comprises, a step of generating the character image corresponding to the sensed movement, a step of identifying and extracting character data corresponding to the generated character image from the database; and a step of displaying the extracted character data on the display screen"* The Examiner must respectfully disagree. As it is disclosed by Gordon (Fig 2 & 8 and column 16- 18) the

user is using the pointer to input a character (Graphical symbol) that is displayed on the screen. Further more Gordon (Column 16- 18) discloses that the device has the capability of character recognition. In column 16 line 1-29 the user moves his or her fingertip over the pseudo trackball (or other fingertip tracker) in a way that traces out the shape of the character to be recognized and the device displays the character that is traced by the user on to the display screen. Further more it is inherent to have database in order to compare the traced (i.e. inputted) character with stored character image and character data so that the device can recognize and display the proper or right inputted character. Therefore it would have been obvious to see in fig 2 & 8 and column 16- 18 that by moving the pointer the user can input different character wherein character recognition mechanism can recognize and display the character inputted by the user. Therefore the fact that Fig 2 & 8 and column 16- 18 discloses characters that can be inputted by the operator using the pointer in order to input selected characters as it is disclosed in the limitation of Claims 1 and 7 wherein a step of inputting a character by moving the pointer have been met.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-4, 6-8 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (US Pat. No 6,677,929) in view of Shinz et al. (JP 409237157A).

As in Claim 1, Gordon et al. discloses *a method of inputting a character in a portable device* (Column 5 line 28-29 and Fig 2) *having a display screen*, (Column 10 line 11 and Fig 2 item 30) *comprising*:

- *a step of maintaining a database in which at least one character image and character data are recorded corresponding to each other*; (Fig 8 and Column 16-18) discloses that the device recognizes and displays the characters that is traced out in the shape of character by the user. Even thou Gordon et al does not explicitly discloses a database it is inherent to have the database in order to compare and display the characters that are traced out in the shape of character by the user.

- *a step of sensing the movement of an object which moves being in contact with an optical interface unit of the portable device;* (Column 7 line 51-67 and fig 3) discloses that the optical sensor senses the motion of the fingertip (digit 3) which is in contact with transparent dome shaped contact point where the detecting light source comes out.
- *a step of inputting a character by moving the pointer from the pointer start area according to the sensed movement;* (Column 11 line 37-55 and Fig 2 & 4) discloses the user can enter a graphical character by moving the pointer from its start position on the display.
- *wherein the step of inputting a character by moving the pointer from the pointer area according to the sensed movement comprises: a step of generating the character image corresponding to the sensed movement.* (Fig 8 item 75 & 76 and Column 17 line 37- 60) discloses inputting a character based on sensed movements of users fingertip and (Fig 2 and Column10 line 14- 18) discloses the use of pointer wherein the pointer moves in accordance to the movements of users finger on surface of the detector (i.e. pseudo trackball). Therefore it would have been obvious to see that inputting a character by moving the pointer from the pointer area according to the sensed movement is disclosed by Gordon.
- However Gordon et al. fails to disclose *a step of locating a pointer at a predetermined pointer start area on the display screen; a step of returning the pointer to the pointer start area according to the input of the character.*

- Shinz et al. discloses *a step of locating a pointer at a predetermined pointer start area on the display screen*; (Abstract) discloses the cursor having a predetermined position (i.e. practical position).
- Shinz et al. further discloses *a step of returning the pointer to the pointer start area according to the input of the character*. (Abstract) discloses the cursor having a predetermined position (i.e. practical position) where the cursor will return to its original position (i.e. practical position) when the operator moves his/her finger from the detecting unit.

Gordon et al. and Shinz et al. are analogous art because they are from the common area of cursor control input devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Gordon's et al. cursor control with Shinz et al. predetermined cursor position system in order to make it easy to locate the cursor on screen, because Shinz et al. discloses that a cursor that has predetermined position (i.e. practical position) on the display device where the cursor will return to its original position (i.e. practical position) when the operator moves his/her finger from the detecting unit is useful in cursor control input device, Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cursor controlled input device of Gordon et al. so that it can incorporate the capability of returning the cursor to its predetermined position as disclosed by Shinz et al. in order to prevent a cursor from being hidden or disappearing from view. The Shinz et al. feature of predetermined positioning of the cursor will enhance the cursor control of Gordon et al by making it easy to locate the cursor on the display screen.

As in Claim 2, Gordon et al. discloses *the method of claim 1*, as discussed above, but fails to disclose *the step of returning the pointer to the pointer start area according to the input of the character, the pointer is returned to the pointer start area in case that it is sensed that the object has ended the contact with the optical interface unit*, However, Shinz et al. (Abstract) discloses the cursor having a predetermined position (i.e. practical position) where the cursor will return to its original position (i.e. practical position) when the operator moves his/her finger from the detecting unit. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify cursor input device of Gordon et al. so that it can incorporate the capability of returning the cursor to its predetermined position because Shinz et al. discloses that the cursor returns to its predetermined position when it is not in use.

As in Claim 3, Gordon et al. discloses *the step of inputting a character by moving the pointer from the pointer start area according to the sensed movement, the character is inputted in case that a character located at the area in which the pointer has moved is selected by a user*. (Column 11 line 37-55 and Fig 2 & 4) discloses the user can enter a graphical character by moving the pointer from its start position on the display to where the characters to be selected are. Hence its start position would be where the cursor is located on the display at the begging of the function (program).

As in Claim 4, Gordon et al. discloses *the method of claim 1, wherein: in the step of sensing the movement of an object which moves being in contact with an optical interface unit of the portable device (Column 4 line 41-53), the movement is sensed by measuring at least one of the speed and the distance of the movement of the object; (Column 11 line 32-36) and in the step of inputting a character by moving the pointer from the pointer start area according to the sensed movement, (Column 11 line 37-55 and Fig 2 & 4 discloses the user can enter a graphical character by moving the pointer from its start position on the display to where the characters to be selected are. Hence its start position would be where the cursor is located on the display at the begging of the function (program)). the pointer is moved in response to at least one of the measured speed and distance. (Column 7 line 34- Column 8 line 19)*

As in Claim 6, Gordon et al. discloses *a computer readable medium in which a computer-executable program for executing (Column 17 line 1-19) a method of claim 1 is recorded. (Fig 6)*

As in Claim 7, Gordon et al. discloses *a portable device (Fig 2) capable of inputting characters (Abstract), comprising:*

- *a database maintaining at least one character image and character data corresponding to the character image; (Fig 8 and Column 16-18) discloses that the device recognizes and displays the characters that is traced out in the shape of character by the user. Even thou Gordon et al does not explicitly*

discloses a database it is inherent to have the database in order to compare and display the characters that are traced out in the shape of character by the user.

- *a display unit for displaying a predetermined character or a pointer on a predetermined display screen;* (Column 10 line 11-15 and Fig 2 item 30 & 31)
 - *an optical interface unit contacting with a predetermined object,* (Column 10 line 9 and Fig 3)
 - *emitting an optical signal to the object, and receiving an optical reflection signal reflected from the object;* (Column 11 line 14-18 and Fig 3)
 - *an optical signal sensing unit sensing the movement of the object by interpreting the received optical reflection signal and;* (Column 7 line 64-67 and Fig 1 item 10 & 22) and (Column 11 line 12-14 and Fig 2 item 10)
 - *inputting a character by moving the pointer from the pointer start area according to the sensed movement,* (Column 11 line 37-55 and Fig 2 & 4)
- discloses the user can enter a graphical character by moving the pointer from its start position on the display.
- *and returning the pointer to the pointer start area according to the input of the character.* (Column 11 line 37-55 and fig 2 & 4) since Gordon et al. discloses moving the cursor to input required character it would have been obvious to return the cursor to its starting position(i.e. where the cursor was located at the start of the application) .

- *a character image generating unit generating a pointer character image corresponding to the sensed movement; (Fig 8 item 78 and Column 16-18)*
- *a character identifying/extracting unit (Fig 8 item 76 & 78) identifying the character image corresponding to the pointer character image from the database (inherent) and extracting the character data corresponding to the identified character image. (Fig 8 item 75 & 76 and Column 17 line 37- 60)*

discloses inputting a character based on sensed movements of users fingertip and (Fig 2 and Column10 line 14- 18) discloses the use of pointer wherein the pointer moves in accordance to the movements of users finger on surface of the detector (i.e. pseudo trackball). Therefore it would have been obvious to see that inputting a character by moving the pointer from the pointer area according to the sensed movement is disclosed by Gordon.
- *Gordon et al. fails to disclose a pointer control unit locating the pointer at a pointer start area on the display screen, However, Shinz et al. (Abstract) discloses the cursor having a predetermined position (i.e. practical position) on the display screen.*

Gordon et al. and Shinz et al. are analogous art because they are from the common area of cursor control input devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Gordon's et al. cursor control with Shinz et al. predetermined cursor position system in order to make it easy to locate the cursor on screen, because Shinz et al. discloses cursor that has predetermined position

(i.e. practical position) on the display device where the cursor will return to its original position (i.e. practical position) when the operator moves his/her finger from the detecting unit. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify cursor controlled input device of Gordon et al. so that it can incorporate the capability of returning the cursor to its predetermined position as disclosed by Shinz et al. in order to prevent a cursor from being hidden or disappearing from view. Shinz et al. feature of predetermined positioning of cursor will enhance cursor control of Gordon et al by making it easy to locate the cursor on the display screen.

As in Claim 8, Gordon et al. discloses *the portable device* (Fig 2) as discussed above, but fails to disclose *the pointer control unit returns the pointer to the pointer start area in case that it is sensed that the object has ended the contact with the optical interface unit*. However, Shinz et al. (Abstract) discloses the cursor having a predetermined position (i.e. practical position) where the cursor will return to its original position (i.e. practical position) when the operator moves his/her finger from the detecting unit. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Gordon's et al. cursor control with Shinz et al. predetermined cursor position system in order to make it easy to locate the cursor on screen, because Shinz et al. discloses cursor that has predetermined position (i.e. practical position) on the display device where the cursor will return to its original

position (i.e. practical position) when the operator moves his/her finger from the detecting unit.

As in Claim 10, Gordon et al. discloses *the portable device (Fig 2) of claim 7, wherein the optical interface unit comprises a predetermined object surface to which the optical signal is transmitted, a lens, and an image surface, the object surface, the lens, and the image surface are horizontally disposed.* (Column 10 line 52-66 and Fig 3)

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENYAM KETEMA whose telephone number is (571)270-7224. The examiner can normally be reached on Monday- Friday 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shalwala Bipin H can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business

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Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ B.K. /

Examiner, Art Unit 2629

/Bipin Shalwala/

Supervisory Patent Examiner, Art Unit 2629